DOCUMENT RESUME

ED 177 319 CE 022 755

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TITLE Executive Summary of the Vocational Education Equity Study. Final Report.
INSTITUTION American Institutes for Research in the Behavioral Sciences, Palo Alto, Calif.
SPONS AGENCY Office of Education (DHEW), Washington, D.C.
REPORT NO AIR-66600-4/79-FR
PUB DATE Apr 79
CONTRACT 300-77-0318
NOTE 45p.; For related documents see CE 022 751-754

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Data Collection; Federal Legislation; National Surveys; Program Evaluation; *Sex Discrimination; Sex Fairness; *Sex Stereotypes; State Agencies; *Vocational Education

ABSTRACT

A congressionally mandated study was conducted to assess the nature and extent of sex discrimination and stereotyping in all vocational programs and of efforts which are being made to reduce or eliminate such inequities. Seven major study objectives were developed. Two of these include the following: identify and analyze the various practices and activities at the state and local levels which may facilitate or hinder equal opportunities for both sexes to have equal access to and preparation for a broad range of occupational fields; and develop criteria by which federal, state, and local administrators can measure progress in reducing sex discrimination and stereotyping. Forty-nine states and the District of Columbia were visited in the spring of 1978. In addition, a school sample of 100 schools was selected on the stratified random basis, using the stratification variables of region of the country, city size, and type of school. The types of schools included in the sample are comprehensive high schools, vocational high schools, vocational centers, technical institutes, and community/junior colleges. From each school, four counselors, eight teachers, and thirty-five students were sampled, including sufficient numbers of nontraditional and ethnic minority students to determine if their responses differ from those of other students. (A summary of findings for each of the seven objectives is included in this document.) (JH)

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ED177319

AIR-66600-4/79-FR

Final Report

EXECUTIVE SUMMARY OF THE VOCATIONAL EDUCATION EQUITY STUDY

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CE 022 755

April 1979

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INTRODUCTION

The Vocational Education Equity Study is the result of a Congressional mandate. Section 523(a) of the Education Amendments of 1976 (P.L. 94-482) states:

> The Commissioner of Education shall carry out a study of the extent to which sex discrimination and sex stereotyping exist in all vocational education programs assisted under the Vocational Education Act of 1963, and of the progress that has been made to reduce or eliminate such discrimination and stereotyping in such programs and in the occupations for which such programs prepare students.

The purpose of this chapter is to summarize the major findings of this study. It is hoped that the results will be useful not only to Congressional decision-makers, but also to vocational education administrators, practitioners, and researchers.

The mandate was to assess sex discrimination and stereotyping in all vocational programs. Given their numbers, this is, of course, virtually impossible. However, sampling procedures were designed for this study which yield an accurate estimate for all vocational programs. Forty-nine states and the District of Columbia were visited in the spring of 1978. In addition, a school sample of 100 schools was selected on the stratified random basis, using the stratification variables of region of the country, city size, and type of school. The types of schools included in the sample are: comprehensive high schools, vocational high schools, vocational centers, technical institutes, and community/junior colleges. From each school, 4 counselors, 8 teachers, and 35 students were sampled, including sufficient numbers of nontraditional and ethnic minority students to determine if their responses differ from those of other students. Staff at each school's corresponding local education agency were also interviewed. By weighting the responses of all those interviewed, it is thus possible to get estimates for the total national population.

This summary is organized around the seven major objectives* of the study. These objectives address not only the existence of discrimination and stereotyping,

*For purposes of summarizing the results, two of the original eight objectives have been combined. The objectives are listed in their original form and order in Volume IV of this Final Report, the Replication Handbook.

but also the actions which states, local education agencies, and schools are taking to foster greater sex equity. The study was also given the charge to examine the presence of external factors which contribute to stereotyping and constrain progress to eliminate it, as well as to identify actual programs which appear to be successful in fostering greater equity. Furthermore, based on the results of this study, criteria have been identified which can be used in assessing discrimination and stereotyping in vocational programs in the future. At the conclusion of this chapter the contractors recommendations are made.

Objective 1. ASSESS THE EXTENT TO WHICH SEX DISCRIMINATION AND SEX STEREOTYPING EXIST IN ALL VOCATIONAL PROGRAMS ASSISTED UNDER THE VOCATIONAL EDUCATION ACT OF 1963 AS AMENDED, AND THE PROGRESS WHICH HAS BEEN MADE IN REDUCING SUCH INEQUITIES.

This discussion must begin with the definitions of "sex discrimination" and "sex stereotyping." The definitions which appear in the Office of Education's regulations for Title II of the Education Amendments of 1976 are as follows:

> "Sex discrimination" means any action which limits or denies a person or a group of persons opportunities, privileges, roles, or rewards on the basis of sex.
>
> "Sex stereotyping" means attributing behaviors, abilities, interests, values, and roles to a person or group of persons on the basis of their sex.

According to these definitions, sex discrimination refers to specific actions which limit or deny opportunities, while stereotyping is subtler and more attitudinal. However, these stereotypic attitudes also serve to limit or deny opportunities. Thus in the following discussion, discrimination will refer to policies, practices, and behaviors, and stereotyping will refer to attitudes, all of which serve to limit or deny opportunities on the basis of sex. The extent of sex discrimination and stereotyping will be discussed under the following headings:

- Enrollment Patterns
- Staffing Patterns
- Attitudes Toward Equity

Enrollment Patterns

To gain a full understanding of enrollment patterns of males and females in vocational education it is necessary to examine the patterns within each specific occupational training area, rather than within just the seven broad areas. This type of analysis allows one to determine if the gain in female enrollment in the trade and industrial area, for example, is accounted for by a gain in the traditionally female field of cosmetology or in a traditionally male field such as auto mechanics. Using 1972 BOAE enrollment figures, training programs were classified as traditionally female (80% or more female), traditionally male (80% or more male), or mixed.

The data reveal that in 1978 enrollment patterns are overwhelmingly sex segregated and that progress in reducing sex segregation since 1972 has been minimal. The following facts stand out:

- In the broad areas of health, home economics, and business, women constitute over 75% of all enrollments. In the broad areas of trade and industrial, technical, and agriculture, men constitute over 75% of the enrollments. Distributive education is the only mixed program area. Men constitute approximately 59% of the total enrollments here.

- Women make up over 90% of the enrollment in traditionally female occupations in business and office, health, and trade and industrial areas. This is substantially the same picture revealed by a 1972 BOAE survey, apparently reversing an increase in male enrollment reported by BOAE in 1976. There was a decline, however, in the percentage of women enrolled in traditionally female home economics courses, from 93% to 83%.

- Men continue to predominate in traditionally male occupations, but there has been some increase in the number of women enrolled in traditionally male programs in technical and agriculture fields. About 12% of the students enrolled in such programs are women up from about 9% in technical and 4% in agriculture in the 1972 BOAE survey. Women then and now make up a bit over 6% of the enrollment in traditionally male trade and industrial programs.

- The percentage of male students in traditionally female areas (10.9%) is greater than the percentage of female students in traditionally male areas (7.8%).

In sum, training programs are clearly differentiated by sex and there appears to have been little or no movement in the direction of equalizing enrollment over the last several years.

Whether enrollment patterns which are clearly differentiated by sex are the result of discrimination within vocational education cannot be determined from enrollment data alone. However, when programs are clearly populated by a single sex, students are being channeled into those programs on the basis of sex through some mechanism, be it external or internal. One must be careful, however, not to expect or require that the distribution of the sexes in programs be exactly equal. The objective of equity legislation is to remove barriers and expand opportunities, not to artificially legislate that equal numbers of men and women be in each program. The key is whether sex-related restrictions exist. Table 1 shows how common state, district, and school level staff believe various restrictive practices to be. The following summarizes the findings related to such restriction:

- Staff report that the most blatantly discriminatory behaviors--rules and quotas denying or limiting admissions--have been curtailed. less than 5% feel these practices are most in need of change.

- However, practices which serve to discourage students from entering a nontraditional area are perceived to be much more common. These practices include unwritten understandings that some courses are for a single sex, and counselor suggestions of traditional options and discouragements of nontraditional options. Approximately 60% of all staff feel these practices are most in need of change.

- For the student who has already enrolled in a nontraditional course, approximately equal numbers of staff feel that teacher reluctance to have nontraditional students in their courses has changed the most in the past five years, and see it still in need of change.

- Few students report that school staff have discouraged them from entering nontraditional areas. The percentage of females who were discouraged is higher than the percentage of males. For men and women in traditionally male, mixed, and female programs the figures are as follows (weighted data):

	Percent Discouraged By:				
Women enrolled in ...	Counselors	Teachers	Mothers	Fathers	Friends
Traditionally male programs	2.4	2.0	9.9	5.5	9.9
Traditionally mixed programs	1.2	2.6	3.8	2.8	4.5
Traditionally female programs	1.0	1.2	3.5	1.8	5.1
Men enrolled in ...					
Traditionally male programs	0.7	0.3	0.8	1.2	4.7
Traditionally mixed programs	0.2	0.2	0.9	1.2	4.7
Traditionally female programs	1.0	1.0	1.0	1.9	12.0

Table 1

STAFF PERCEPTIONS OF THE PREVALENCE OF VARIOUS INEQUITABLE PRACTICES

	State Level						District Level								School Level					
	Frequency[a]		Most Change Over Past Five Years		Most Change Still Needed			Frequency		Most Change Over Past Five Years		Still Needed			Frequency		Most Change Over Past Five Years		Most Change Still Needed	
Practice	$\bar{X}$	S.D.	N	%	N	%	Practice	$\bar{X}$	S.D.	N	%	N	%		$\bar{X}$	S.D.	N	%	N	%
Practices overtly limiting entry	--	--	112	32.6	2	.6	Practices overtly limiting entry	--	--	45	32.8	1	.8		--	--	190	26.6	28	4.3
Rules denying admission	2.94	.28	99	28.8	1	.3	Rules denying admission	2.99		40	29.2	1	.8		2.95		172	24.1	16	2.5
Quotas limiting admission	2.96	.20	13	3.8	1	.3	Quotas limiting admission	2.97		5	3.6	0	0.0		2.97		18	2.5	12	1.8
Practices discouraging to nontraditional enrollment	--	--	130	37.5	222	64.7	Practices discouraging to nontraditional enrollment	--	--	62	45.2	69	56.1		--	--	375	52.6	414	63.4
Unwritten understandings	2.26	.73	85	24.7	73	21.3	Unwritten understandings	2.67		38	27.7	25	20.3		2.60		233	32.7	169	25.9
Counselors suggest traditional options	1.84	.71	32	9.3	128	37.3	Counselors suggest traditional options	2.45		16	11.7	30	24.4		2.46		72	10.1	90	13.8
Counselors discourage nontraditional options	2.25	.74	13	3.8	21	6.1	Feeder school counselors suggest traditional options	2.02[b]		5	3.6	6	4.9		2.14		44	6.2	92	14.1
Factors encountered after enrollment	--	--	80	23.2	91	26.6	Counselors discourage nontraditional options	2.76		2	1.5	6	4.9		2.81		20	2.8	27	4.1
Teacher reluctance to have nontraditional students	2.27	.70	63	18.3	53	15.5	Feeder school counselors discourage nontraditional options	2.88[b]		1	.7	2	1.6		2.63		6	.8	36	5.5
Sex considered in placement etc.	2.11	.77	17	4.9	38	11.1	Factors encountered after enrollment	--	--	30	21.9	53	43.1		--	--	147	20.6	210	32.2
No Choice	----	—	22	6.4	28	8.1	Teacher reluctance to have nontraditional students	2.54		21	15.3	26	21.1		2.74		92	12.9	85	13.0
							Sex considered in placement	2.49		9	6.6	27	22.0		2.40		55	7.7	125	19.2

[a]Values used in computing $\bar{X}$ (mean): 1. Commonly (at least 50% of the time)
2. Just some (less than 50% of the time)
3. Rarely, if at all

[b]Based only on responses of Local Directors of Counseling.

Can the school play a supportive role in encouraging nontraditional enrollment, or are the factors determining student enrollment beyond the control of the school? While it seems obvious that society beyond the schoolhouse walls exerts a powerful influence on the aspirations of young people, there is a strong suggestion in this study that the school can have an impact. This comes from the fact that there is a strong positive correlation between the level of equity activity in a school and the proportion of nontraditional enrollment in that school. Thus equity efforts do appear to make a difference in equalizing enrollment patterns. Volume III of this Final Report describes examples of programs designed to realize this effect.

Staffing Patterns

The data clearly show that there is strong differentiation by sex of vocational staffing positions. The following summarizes the findings at the state, district, and school levels. A lack of comparison data from other years precludes assessment of progress.

- State level. Men predominate as occupational area specialists in each of the traditionally male occupational areas (all of the 61 interviewed), in distributive education (17 of the 18 interviewed), and in business and office occupations. Male predominance is least dramatic in business and office areas--19 of the 25 staff members interviewed in the present study were men. Women predominate in home economics (all of the 24 interviewed) and in health (16 of the 19 interviewed). Six staff with overall, rather than occupational program area, responsibility were interviewed in each state. Over 85% of the people in seven of these positions were men. The two exceptions were Sex Equity Coordinator (98% female), and Director of Guidance and Counseling (22% female).

- District level. About 90% of Local Directors of Vocational Education interviewed in the present study were men. Each of the nine women interviewed was in jurisdictions from which a comprehensive high school was sampled. Twenty-nine percent of the Local Directors of Counseling and Guidance interviewed were women.

- School counselors. Fifty-nine percent of the counselors interviewed at schools sampled in the present study were men, as were about 51% of the feeder school counselors.

- School Instructors. Persons of one or the other sex predominate as teachers in each occupational area. Comparison of data collected in the present study with data collected in 1974 by the Office of Civil Rights shows no movement away from traditional patterns. If anything, the opposite is true, but caution must be exercised in comparing data across studies unless the differences observed are truly dramatic.

The figures for the percentage of female instructors by major program area in the two studies are:

	1974 OCR	Present Study
Health Occupations	88.8	95.5
Home Economics	84.4	88.7
Business & Office	53.7	69.8
Distributive Education	26.9	25.4
Technical Occupations	8.3	4.3
Trade & Industrial	9.1	5.5
Agriculture	5.0	12.3

In sum, there are very few positions at any level in which one of the sexes does not predominate.

There is also evidence that efforts to achieve equity in staffing patterns have a positive effect. Those schools with higher "Internal Affirmative Action" Activity Indexes also tended to be those with higher proportions of nontraditional teachers. The effect was greater for women teaching traditionally male occupations than for men teaching traditionally female occupations.

Attitudes Toward Equity

In general vocational educators feel that the various inequitable practices are not justifiable. The following figures show the percentage of the interviewees who felt each of the practices to be justifiable under some circumstances:

	State Level	District Level	School Level
Rules denying admission	2%	7%	7%
Quotas limiting admission	4%	3%	6%
Unwritten understandings that some courses are for a single sex	2%	3%	8%
Vocational school counselors suggesting predominantly traditional options to undecided students	6%	9%	13%
Vocational school counselors discouraging nontraditional choices by already interested students	4%	5%	4%
Teacher reluctance to have nontraditional students in class	6%	6%	5%
Sex being taken into consideration in determining the type of placement	25%	24%	27%

Thus, for all but one of the practices, more than 90% of the state and district staff interviewed were unable to think of a circumstance in which the practice in question is justified. At the school level, this was true for all but two of the practices. Placement is highest at each level.

Students appear to hold the following attitudes toward equity:

- Generally students feel that men and women should have equal opportunity to train for good, well-paying jobs and that there is nothing wrong with encouraging nontraditional enrollments.
- However, in terms of the roles that men and women will fill in the labor force, the majority of students feel there are at least some occupations for which men and women should not have equal access. The percentage who think there are at least some jobs which should not be equally accessible range from a low of 59.7% for women in traditionally male areas to a high of 76.1% for men in traditionally male areas.
- Approximately 60% of students agree at least somewhat that men and women are suited to different jobs. Again, women in traditionally male occupations are least likely to agree (51.1%), while men in traditionally male occupations are most likely to be in agreement (67.5%).
- Over 70% of students felt that men would prefer to be enrolled in classes that have mostly men, while over 60% felt that women would prefer to be enrolled in classes that have mostly women.
- Females display more pro-equity opinions than males on each of the above items, and nontraditional students are more likely to be pro-equity than traditional students of the same sex; the within sex differences, however, never exceed 10%.
- In general, older students display more pro-equity than younger students.
- Student attitudes did not differ as a function of ethnicity.

In sum, while students are in agreement that sex should not bar someone from the chance to train for a good, well-paying job, over half of the students are dubious that men and women are equally suited for all jobs or that access to all jobs should be equal.

Objective 2. IDENTIFY AND ANALYZE THE EXTENT TO WHICH PROGRESS HAS BEEN MADE IN REDUCING SEX DISCRIMINATION AND SEX STEREOTYPING IN OCCUPATIONS FOR WHICH VOCATIONAL STUDENTS TRAIN.

This study did not collect new data from employers, but did analyze existing data from the Bureau of Labor Statistics on the participation rates of males and

females in the occupations for which vocational students train, as well as wages of males and females in the labor force. This analysis is contained in detail in Volume II of the Final Report, Literature and Secondary Data Review. The major findings related to this objective are summarized in this section under the following headings:

- Trends in the sex segregation of occupations for which vocational education programs train students
- Wages of males and females in the labor force

Trends in the Sex Segregation of Occupations for which Vocational Education Programs Train Students

The growth in the labor force as a whole from 1950 to 1976 has been 52%--with the growth in the female labor force during the same time being over 100%. Women formed 29.6% of the labor force in 1950, but had grown to 40.5 by 1977. While the labor force participation rate for women has been steadily increasing, the rate for men has been steadily decreasing. A review of the simple percentages of women workers in each of the standard job classifications shows a continuance of the basic traditional patterns. For example, in 1960 women comprised 97.1% of all secretaries, in 1970 97.6%, and in 1977 99.1%. At the same time, in 1960 women comprised 0.4% of all carpenters, in 1970 1.3%, and in 1977 0.9%. These figures appear to show an increase in segregation, particularly between 1970 and 1977, and in fact for some occupations this is the case.

The issue is complicated, however, by the tremendous growth in females in the labor force. For while in 1960 the labor force was 32.8% female, by 1970 it had become 37.7% female. By 1977, 40.5% of all workers were women. One would expect, then, that all occupations would have become more heavily female--both traditionally female occupations and traditionally male occupations. Therefore a more useful analysis compares the participation of women in a job category with their participation in the labor force as a whole. Analyzing the labor market in this manner, the following patterns emerge in the various job categories.

Professional, technical and kindred workers. Women form just about the same percentage of this large category as they do of the labor force as a whole. By

detailed occupation, of course, the sex distribution varies dramatically. In two technical fields--health technologists and technicians, and engineering and science technicians, there has been a progressive decrease in sex segregation.

Sales workers. Women form about the same percentage of sales workers as they do of the labor force. Women maintain their predominance in the field of retail sales clerks, while the fields of sales representative and wholesale trade remain heavily male. However these two fields have seen an increase in female employment in excess of the increase in the labor force as a whole.

Clerical and kindred workers. Clerical work remains a female stronghold, with approximately twice the percentage of women workers as the labor force as a whole; however, the concentration has not increased. There was some variation from job to job however. The percentage of female bank tellers increased between 1960 and 1970, then decreased slightly in 1977. For bookkeepers the percentage fell from 1960 to 1970 and rose again in 1977. The percentage of female file clerks saw a steady drop from 1960 to 1977.

Craft and kindred workers. The representation of women in craft jobs grew faster than their participation in the labor force between 1960 and 1970, but more slowly between 1970 and 1977. For the broad category, 3.1% of craft workers were women in 1960, 5.0% in 1970, and 5.0% in 1977. For carpenters, painters, machinists, and mechanics the percentage of women compared to the percentages in the labor force as a whole rose between 1960 and 1970 but fell in 1977. A steady increase in the proportion of women occurred in the fields of blue collar supervisor, tailor, telephone installer, and baker from 1960 to 1977.

Operative, except transport. In this category the percentage of females has decreased slightly but stayed approximately proportionate to the percentage of females in the labor force as a whole. Some of the female-intensive occupations in this category, such as clothing ironers and sewers and stitchers, remain heavily female. Some heavily male jobs, such as meat cutters and butchers, have seen growth in the female percentage greater than the rise of women's participation in the labor force. Slight increases in female workers have occurred in the fields of welders and flame cutters.

Transport equipment operative. This category has seen an increase in female participation substantially in excess of overall growth in the female labor force. However, women still form only a small percentage of all workers in this field (6.8% in 1977). The growth is accounted for largely by the job of bus driver. Substantial growth has also occurred in the category of taxicab drivers and chauffers. The job of truck driver shows a pattern similar to that seen in some of the skilled craft jobs. The percentage of women rose between 1960 and 1970, but declined in 1977, reflecting an absolute decline in the percentage females from 1.5% in 1970 to 1.3% in 1977.

Nonfarm laborers. There have been slight increases in female employment in this area. There was a substantial rise for gardeners and groundskeepers from 1960 to 1977, while animal caretakers saw a decline from 1960 to 1970, followed by a rise in 1977.

Service workers. While in 1977 service work still accounted for more working women than any other field except clerical, the proportion of women had declined slightly. This pattern appeared for food service workers and health service workers. The general category of personal service workers saw a general rise. However, the sub-categories of hairdresser and cosmetologist, and housekeepers, saw a decline. There was an increase in the percentage of women in protective service jobs (police, fire, security guards) substantially greater than the overall growth in female participation in the labor force.

To summarize, the data show a strong increase over time in the participation of women in the labor force. The overall distribution of women among job categories, however, remained basically the same in 1977 as it was in 1960. Women are still heavily concentrated in traditionally female jobs such as secretary (99.9% female in 1977) and waiter/waitress (90.4% female in 1977), and form only a small percentage of workers in traditionally male jobs such as plumbers (0.5% female in 1977) and automobile mechanics (0.9% female in 1977). There has, however, been a decrease in sex segregation in a number of jobs for which vocational education trains students. For example, there have been gains in female participation in jobs such as protective service workers and bus drivers far in excess of the increase in women's participation in the labor force as a whole. Nevertheless, on balance occupations clearly continue to be differentiated by sex.

Wages of Males and Females in the Labor Force

Data have been collected by the U.S. Department of Commerce, Bureau of the Census, which compare the median earnings of full-time, year-round male and female workers. These data show that women's median earnings as a percent of men's were 63.9% in 1955, and have dropped steadily, with only slight fluctuations, to 59.4% in 1970. This varies somewhat by specific occupation. Generally, women who work in fields in which women predominate earn less than women who work in fields where men predominate. Minority males earn less than white males, but more than white or minority females. Minority females earn slightly less than white females, but the gap is not as great as it is among the males. Thus these data indicate that little progress has been made.

Objectives 3. IDENTIFY AND ANALYZE THE VARIOUS PRACTICES AND ACTIVITIES AT THE STATE AND LOCAL LEVELS WHICH MAY FACILITATE OR HINDER EQUAL OPPORTUNITIES FOR BOTH SEXES TO HAVE EQUAL ACCESS TO AND PREPARATION FOR A BROAD RANGE OF OCCUPATIONAL FIELDS.

In addition to collecting information on the presence of discriminatory practices and attitudes, the study assessed how the vocational education community is reacting to discrimination and stereotyping. In other words, is an attempt being made to overcome inequities when and where they exist? Considerable information was collected regarding activities which are being implemented at the state and local levels in an effort to expand equal opportunities and address inequities. Particular attention was paid to the activities listed in the legislation and to the role and responsibilities of the mandated position of state Sex Equity Coordinator. This section will summarize:

- The role and responsibility of the state Sex Equity Coordinators
- State level activity designed to address inequities
- Local level activity designed to address inequities.

The Role and Responsibility of the Sex Equity Coordinator

The following points summarize the major roles and responsibilities of the Sex Equity Coordinators:

- At the time of data collection, 47 states had appointed permanent Sex Equity Coordinators. Two of these coordinators have other duties in addition to implementing sex equity activities. Three states had appointed acting coordinators while searching for a qualified candidate. However, 11 coordinators had held the job for less than four months; and an additional 14 coordinators had been on the job less than seven months. Therefore half the coordinators were very new to the job.

- The major selection criteria for the equity coordinator cited by the state directors were experience in some aspect of vocational education, administrative experience, and the ability to work well with others. Only seven state directors stated they sought a candidate with a strong commitment to sex equity.

- When Sex Equity Coordinators were asked what experience in the areas of sex equity and vocational education they brought to the job, 12 cited no equity experience and 9 no vocational education experience.

- Eighteen coordinators report directly to the State Director of Vocational Education; six report to the assistant director. Sixteen are located further down in the vocational education administrative structure, and ten appear to be located outside the vocational education division.

- Of the activities specified in the legislation, coordinators report they are spending approximately 25% of their time on creating awareness of programs and activities designed to reduce inequities. This is the highest percentage of time reported in any of the specified activities. The coordinators also feel this is the most useful activity for achieving sex equity in their states.

- Thirty-seven states have given the coordinators a budget to administer.

- Thirty-six states are spending the $50,000 set aside for sex equity purposes on the salary of secretarial support staff, in addition to the salary of the coordinator. Twelve states are also spending this money on the salaries of professional assistants to the coordinator. Nine states are spending the $50,000 on all three types of staff.

- Twenty percent of the coordinators report they have experienced no inhibiting factors on the job. The greatest inhibiting factors cited by coordinators who report to the state directors are: too much to do (22.2%), traditional and conservative attitudes of others (16.7%), and delays in beginning the job (16.7%). The greatest inhibiting factors cited by coordinators who report to someone other than the state director are: too much to do, lack of cooperation from staff, general bureaucracy, and lack of power and support (all at 12.5%).

- Eighty-five percent of state personnel (excluding the state director) could describe functions of the sex equity coordinator. Fifteen percent were unable to think of any function of the coordinator, or stated that the coordinator was "getting in their way."

The major caution in interpreting these findings is that half the coordinators had been on the job for such a short time. Thus in many ways it is too early to assess the effectiveness of the sex equity coordinators.

State Level Activity Designed to Address Inequities

In order to examine the level of state activity designed to respond to the legislation and address inequities, Table 2 is provided. This table reveals that:

- The activities which states are undertaking primarily involve review and analysis of programs, policies, and procedures. Approximately two-thirds of the states are currently implementing such activities.
- Only 32% of the states are currently taking action to correct problems uncovered.
- Sixty-four percent of the state directors report they are currently implementing activities to assist local education agencies, but assistance to "others" (in this case teacher training institutions, employers, and community organizations) is only being implemented by 46%, 22%, and 34% of state directors, respectively.

According to sex equity coordinators, the following percentage of states are implementing these additional more action-oriented activities:

Review of local curriculum materials for sex bias	48%
Sponsorship of programs to make students aware of inequities	38%
Sponsorship of programs to make students aware of or encourage them to enter nontraditional programs	42%
Sponsorship of special job development, placement, or follow-up for nontraditional students	36%
Recruitment of females for state level jobs usually held by males	34%
Recruitment of males for state level jobs usually held by females	26%
Provision of incentives to schools to hire females in traditionally male fields	2%
Provision of incentives to schools to hire males in traditionally female fields	0%

Table 2

PERCENT OF STATES IMPLEMENTING SPECIFIC PROVISIONS OF THE LEGISLATION: RESPONSES OF STATE DIRECTORS

Activity	Implementing	Intend to implement; not begun	No plans/ Don't know
Gather, analyze, disseminate data on students and employees	66%	28%	6%
Develop and support actions to correct problems discovered above	32%	56%	12%
Gather and disseminate information to create awareness of activities to reduce inequities	92%	0%	8%
Review distribution of grants to assure women's needs are addressed	80%	14%	6%
Review all the state's vocational education programs for sex bias	62%	36%	2%
Monitor the implementation of laws prohibiting discrimination in hiring, firing, promotion	64%	14%	22%
Review and provide recommendations for annual plan regarding overcoming sex inequities	50%	42%	8%
Assist LEAs and others to improve opportunities for women:			
LEAs and community colleges	64%	28%	8%
Teacher training institutions	46%	26%	28%
Employers	22%	32%	46%
Community organizations	34%	36%	30%

Thus in general at the state level there is a much greater effort in terms of review and monitoring than in terms of action to overcome inequities. While the essence of the new legislation requires that programs actively be supported to overcome inequities, the majority of states have yet to respond to this charge.

When correlations were computed between state level and school level activity, there was modest evidence that active states correlate with active schools. However, state level activity is not correlated with the proportion of nontraditional male and female students in the state. While it is perhaps too early to see an increase in nontraditional enrollment as a result of state level activity, it is one very clear standard by which success can be measured.

Local Level Activity Designed to Address Inequities

A pattern similar to that at the state level emerges when activity at local education agencies is examined. That is, local directors report the greatest activity to be review and monitoring of activities rather than student or community oriented activities. Table 3 shows the percent of local directors who are implementing various activities.

Sixty percent of the LEA directors indicated they were implementing at least one type of activity to meet the needs of older women returning to school. The percent of LEAs implementing specific activities of this nature are presented below:

Activity to Meet the Needs of Older Women	Percent of LEAs Implementing
Provide special re-entry programs	36.5%
Provide remedial programs for women lacking background to enter traditionally male fields	26.1%
Provide evening classes for women who work during the day	43.8%
Provide special counseling for re-entry women	27.1%
Provide financial assistance for re-entry women	22.9%

Approximately 59% of LEA directors indicated their LEA was implementing at least one activity to meet the needs of minority students. The percent of LEAs implementing the following activities is:

Table 3

LOCAL EDUCATION AGENCY ACTIONS TO ELIMINATE INEQUITIES:
RESPONSES OF LOCAL DIRECTORS

Activity	Percent Implementing
Gather, analyze, disseminate data on students and employees	50.0%
Gather and disseminate information to create awareness of programs to reduce inequities	33.5%
Monitor the implementation of laws prohibiting discrimination in staff hiring, firing, promoting	68.6%
Review funding practices to assure guidelines regarding sex equity are carried out	63.5%
Sponsor research and evaluation activities related to sex equity	26.6%
Sponsor programs to make students aware of inequities	29.4%
Sponsor programs to make students aware of or encourage them to enter nontraditional programs	37.5%
Sponsor special job development, placement, or follow-up for nontraditional students	24.2%
Make special guidance and counseling available to nontraditional students	26.6%
Make day-care services available to children of vocational students	23.8%
Sponsor programs for employers or community organizations to alert them to the problems of inequity	20.8%

Activity to Meet the Needs of Minority Students	Percent of LEAs Implementing
Special counselor training and/or counseling approaches	14.6%
Cultural awareness programs for staff	34.4%
Native language examinations	15.6%
Special programs to place minority women	9.4%
Provision of English-as-a-Second Language and other linguistic support services	33.3%
Special programs to attract minority women	17.7%
Special career awareness activities for minority group members	22.9%

For these activities, regional differences favor the West and South.

In sum, approximately two-thirds of LEAs are involved in some review and monitoring activities, but in general no more than one-third are sponsoring or conducting specific activities aimed at fostering greater sex equity.

Objective 4. IDENTIFY AND ANALYZE THE VARIOUS PRACTICES AND ACTIVITIES, INTERNAL TO SCHOOL LEVEL VOCATIONAL PROGRAMS, WHICH FACILITATE OR HINDER EQUAL OPPORTUNITY FOR MALES AND FEMALES.

In addressing this objective, the following topics will be discussed:

- School level activity designed to address inequities
- Perceived constraints to achieving sex equity
- Factors influencing student choice of a occupational training program
- Characteristics of traditional and nontraditional students

School Level Activity Designed to Address Inequities

Table 4 shows how many staff say their schools are taking various actions The following facts emerge:

- Approximately 50% of staff say their schools are engaged in review activities
- In general, only 10% to 20% of staff say their schools are implementing activities directly involving students.

Table 4

SCHOOL ACTIONS TO ELIMINATE INEQUITIES

Type of Activity	School Staff Saying Such an Activity Is Implemented
General equity-related activities:	
1. Programs to alert students to inequities	20.8%
2. Programs to encourage nontraditional enrollment	29.5%
3. Special job development, placement, or follow-up programs for nontraditional students	24.0%
4. Special guidance and counseling services for nontraditional students	25.9%
5. Awareness programs for employers or community organizations	13.5%
6. Day-care services for children of students	13.6%
7. Review of student admission policies for equity	54.3%
8. Review of student recruitment policies for equity	50.8%
9. Title IX self-evaluation	47.3%
10. Invitations to report instances of inequities	42.4%
11. Review of curriculum and teaching materials for bias	41.0%
Activities to meet the needs of minority students:	
12. Special training for counselors	13.5%
13. Cultural awareness programs for staff	24.2%
14. Examinations provided in native language	8.7%
15. Special placement services for minority women	10.8%
16. English-as-a-Second Language or other linguistic support	20.7%
17. Programs to attract minority women	10.8%
18. Career awareness program	20.3%
Activities to meet the needs of older women returning to school:	
19. Re-entry programs	14.5%
20. Remedial programs to equip women to enter male fields	16.1%
21. Evening classes	31.1%
22. Special counseling	14.0%
23. Financial assistance	10.7%

Additional data reveal that:

- Over 75% of students are attending schools where staff are not really sure whether the school is doing anything formally to make students aware of or encourage them to enter nontraditional programs.
- Over 60% of students are in schools where there is a similar lack of staff information concerning programs to make students aware of potential inequities.

Thus there appears to be little activity at the school level to foster equity--particularly student-oriented activity. The data upon which the above table was based, together with other information collected during the study, were used to develop several "activity indexes." These indexes were then correlated with the proportion of nontraditional students in school. While the level of school activity overall is low, the following important finding emerged:

- There is clear evidence that those schools putting the most effort into various kinds of activities to further equity are also those experiencing the greatest amount of nontraditional enrollment.

Perceived Constraints to Achieving Sex Equity

Each staff member interviewed was given the opportunity to indicate what she or he felt to be the most important factor working against sex equity in vocational education. The first constraint mentioned by each respondent was recorded and classified into one of four categories; the respondent was then asked specifically whether and what constraints existed in the other categories. The frequency with which a constraint in each of the major categories was the first mentioned is:

Constraints in:	State Staff	District Staff	School Staff
Vocational education	21.4%	19.2%	12.1%
Education outside of vocational education	8.5%	2.1%	5.0%
Employer attitudes or actions	11.8%	17.8%	21.0%
Community attitudes or values	51.6%	50.7%	48.1%

Clearly then, the great majority of vocational educators feel the major constraints to sex equity lie outside vocational education. Vocational educators may be able to exert a certain amount of influence over some of them, but the bulk of constraints of primary importance are seen to be outside of the domain in which vocational educators have a primary influence.

The figures below reflect the frequency with which various kinds of constraints were mentioned as occurring within vocational education and the education system in general. Recall that these constraints may either have been mentioned as the primary constraint or in response to subsequent probing.

	State Staff	District Staff	School Staff
Constraints within Vocational Education			
Teacher attitudes/lack of awareness	39.1%	29.3%	13.0%
Administrator attitudes/lack of awareness	30.7%	19.7%	9.1%
Student attitudes/lack of awareness	17.6%	21.1%	16.9%
Lack of appropriate facilities	3.4%	2.1%	1.8%
Constraints within General Education			
Counselor attitudes/lack of awareness	19.7%	14.3%	7.5%
Teacher attitudes/lack of awareness	11.0%	6.1%	2.8%
Pervasive stereotyping in education	18.5%	8.2%	8.9%

To summarize:

- Vocational educators at all levels feel that constraints outside the educational system present the greatest barriers to sex equity.
- When staff are probed for examples of constraints within vocational education, state staff are more likely to mention a constraint related to teachers, administrators, or students than are district staff. The latter are, in turn, more likely to mention constraints related to teachers or administrators than are school staff. In other words, the closer the staff member to the "scene of action" the less likely that that person will mention administrators, teachers, or students as a source of constraints.

Factors Influencing Student Choice of an Occupational Training Program

The following factors relate to student choice of a training program:

- Slightly over half of the students indicated that they learned of their vocational programs through a school program or from a school staff member. (Together, parents and friends were mentioned by about 30% of the students.)
- While the majority of students claim to have the primary influence over their own occupational choices, the school compares favorably with family and friends among the remainder. A family member was mentioned as having primary influence by about 15% of the men, and

17% of the women. School staff were mentioned by about 12% of the former and 11% of the latter, while friends were mentioned by about 5% of each. How many of the over 60% who claimed to make their own decisions had these decisions critically influenced by the family or the school in ways unrecognized is, of course, impossible to say, but the number is probably substantial.

- Counselors report a variety of methods to inform students of training opportunities. About 75% of counselors say that student preference is the primary basis for making curriculum recommendations; approximately 25% also report student records (grades, etc.) as the major factor.

- Counselors report no uniform system for filling limited openings. Thirty-seven percent report a first-come, first-served basis, 21% cite previous achievement, and 10% cite seriousness of intent or interest.

- Thirty-eight percent of vocational school counselors report they employ special techniques to attract nontraditional students. Female counselors were somewhat more likely to report such activities than their male counterparts.

- Nontraditional students tend to be more knowledgeable about programs to encourage nontraditional enrollment. This indicates that such programs are having the desired effect; however, only about 25% of students are in schools where the staff consensus is that such a program exists.

The data related to discouragement of nontraditional choices were presented earlier. Information on encouragement of nontraditional choices was also collected. The percentages of males and females enrolled in traditionally male, female, and mixed programs who were encouraged by school personnel, parents, and friends are presented below (weighted data):

	Encouraged by:				
Women enrolled in ...	Counselors	Teachers	Mothers	Fathers	Friends
Traditionally male programs	8.7%	7.5%	9.1%	12.6%	14.6%
Traditionally mixed programs	5.4%	5.4%	3.5%	3.0%	8.4%
Traditionally female programs	3.7%	4.4%	4.4%	3.3%	6.6%
Men enrolled in ...					
Traditionally male programs	3.4%	3.8%	2.3%	1.3%	5.2%
Traditionally mixed programs	5.9%	6.9%	3.3%	2.1%	5.0%
Traditionally female programs	10.5%	11.5%	9.6%	1.9%	7.7%

While these percentages are generally quite small they are larger than the percentages shown for discouragement of nontraditional choices. Nontraditional students report more such encouragement than traditional students.

Characteristics of Traditional and Nontraditional Students

Traditional and nontraditional students were compared on a number of characteristics. The more salient results are as follows:

- Age. Traditional and nontraditional students were compared overall and separately for men and women within each type of school. In all but one comparison, traditional and nontraditional students differed by an average of less than two years. The one exception was among men enrolled in technical institutes where the traditional students were about 3½ years older than their nontraditional counterparts. This difference was not reliable at even the .10 level, however. In sum, no noteworthy age differences were discovered between traditional and nontraditional students in the sample.

- Socioeconomic status as measured by occupational level of parents. There was essentially no difference between traditional and nontraditional students on this measure. There is slight evidence that nontraditional males have mothers with slightly higher SES.

- Plans for the future. Overall, nontraditional students appear to be more ambivalent about their plans for the future. Traditional students are more likely to plan to enter the field for which they are training. When asked to select the most desirable occupation from among a list of occupations, over 85% of men and about 50% of women enrolled in traditionally male occupations picked a traditionally male occupation. Likewise, over 80% of the women enrolled in traditionally female occupations chose a traditionally female occupation as a first choice, as did about half the men.

There was no efficient way to collect attrition data in the present study but perceptions of attrition rates for traditional and nontraditional students were gathered. In general the perceptions of attrition rates are mixed. About half of vocational school counselors feel attrition rates are the same for traditional and nontraditional students. The remainder are about equally split between those who feel nontraditionals drop out more and those who feel they drop out less. School staff feel that nontraditional students are well accepted by their fellow students.

Objective 5. IDENTIFY AND ANALYZE THE SCHOOL PROGRAMS AND PRACTICES WHICH APPEAR TO BE SUCCESSFUL IN REDUCING OR ELIMINATING SEX DISCRIMINATION AND STEREOTYPING AND PROVIDING EQUAL ACCESS TO ALL STUDENTS TO A WIDE RANGE OF TRAINING OPPORTUNITIES AND JOBS. CASE STUDIES OF SUCH PROGRAMS SHOULD BE DEVELOPED.

In this section, the results of the search for successful programs will be described. It contains a synthesis of Volume III of this Final Report, which describes case studies and promising approaches for achieving sex equity in

vocational education. Additional state, local, and school level practices which appear to be successful are described under objectives two and three of this chapter. This section briefly describes:

- The search for succcessful programs
- Characteristics of the selected programs
- Guidelines for replication

The Search for Successful Programs

A nationwide search was conducted in order to identify vocational programs that are reducing sex inequities. The search employed three basic techniques: (a) we contacted experts in the field, including our advisory panelists; (b) surveyed the relevant literature; and (c) during the data collection phase of the study we asked many of those we interviewed if they were aware of vocational programs with a nontraditional focus. This search uncovered 100 promising programs, 36 of which passed the following initial screening criteria:

- The program is currently in operation
- The program is targeted for secondary or postsecondary populations
- Information is available that documents the program outcomes
- The program focuses on reducing sex inequities
- The program is suitable for replication elsewhere.

Twelve of these programs were described in case studies and twelve were described briefly as promising approaches. The twelve case study programs and the special features of each are described in Table 5.

Characteristics of the Selected Programs

The programs can be described in the following ways:

- The basic types of activities in these programs involve expanding awareness of opportunities, job readiness skills, exploration, vocational skill training, and staff development.
- Three of the programs are targeted specifically for the secondary level, eight for the postsecondary level, and one for both levels.
- Half are designed specifically for women, and half for both males and females.

Table 5

TITLE, LOCATION, AND SPECIAL FEATURES OF CASE STUDY PROGRAMS

ADVOCATES FOR WOMEN Hayward, CA	Nontraditional training using existing area facilities; stipends for participants
NEW VIEW Mountain View, CA	College credit classes; paid internships in technical fields
AREA VOCATIONAL PROGRAM Adams County, CO.	GED and ESL instruction; uses facilities of 4 school districts; job development; focus on nontraditional training for women
WENDI Cocoa, FL.	Career planning; prepares women for re-entry or entry into job market
PROJECT MOVE Ithaca, NY	Inservice training for teams of secondary staff; graduate credits for 2 semester courses
ELI WHITNEY VOCATIONAL HIGH Brooklyn, NY	Hands-on experiences in all vocational areas for all freshmen students
NEW PIONEERS Raleigh, NC	Statewide training of vocational administrators, instructors, and counselors in sex equity
WORK OPTIONS FOR WOMEN Raleigh, NC	Nontraditional skills training at 5 community colleges; stipends paid; 6 months on-the-job training
INDUSTRIAL ORIENTATION Eugene, OR	Hands-on experiences in 8 nontraditional vocational areas; career planning and counseling
FACET/FACIT Charleston, SC	Recruitment of high school students for special summer program; technical training for participants
NONTRADITIONAL JOB OPPORTUNITIES Longview, WA	Skill training with cooperative links to area industries; high placement rate
WOMEN'S DEVELOPMENT CENTER Pewaukee, WI	Resource center; individual and group counseling; career planning workshops

- Special target populations served include low income individuals, ethnic minorities, and older women returning to school.

- Three programs take place in urban settings, five in suburban settings, two are located in rural areas, and two are statewide efforts.

- The programs are funded by a variety of sources including vocational education funds from the state board and local districts, CETA, career education funds, private foundations and industry

Of the 12 case study programs, 10 have some state or local vocational education funding; 5 have CETA funding, 1 has career education funds, and 2 have private foundation or industry funds.

Guidelines for Replication

The case study programs have developed to meet needs in their own settings and they represent a variety of approaches for fostering greater sex equity. However, all of the programs have features in common and it is these features which appear to be important to successful replication. Briefly, the approaches which seem key to success are as follows:

- Establish liaison with employers. The developers of virturally all the case study programs felt that this was of primary importance. Since employers hold the ultimate key to the success of any training, it is vitally important to gain their cooperation and support of the program. Several methods for doing this are described in the case studies.

- Provide a thorough orientation to the program. It appears to be essential for program participants to have a clear idea of what the program itself entails and a realistic picture of the job market they will enter. Such orientation allows programs to work with participants who are motivated and serious about the training they are to receive. Because this is such an important consideration, the entire content of several programs was designed to provide an orientation to nontraditional career options.

- Obtain full support from and integration with the host agency. This recommendation applies particularly to programs hosted in community colleges. Developers felt the programs must be perceived as completely integrated into the structure of the college rather than as an "add-on" feature. This gives the program more visibility and clout with the community at large and potential participants in particular.

- Provide necessary support services to participants. Many programs felt that a key ingredient of their success came from offering supportive counseling services to clients. Individuals enrolled in nontraditional programs may need additional encouragement and support when

striking out on an untraveled path. Re-entry women also often encounter family problems and other pressures associated with returning to school or the labor market. All programs emphasized the value of making use of existing services rather than duplicating efforts.

- Carefully plan and evaluate the program. A successful program must have a clear idea of what it hopes to achieve, and a way of measuring whether it is achieving it. Evaluation results provide the necessary feedback for making improvements. Following up participants once they have left the program was frequently mentioned as the most useful source of evaluation data.

- Hire competent, dedicated staff. This is obvious but vitally important. The particular qualities of staff which appear to be important for equity programs are:
  - A genuine commitment to sex equity
  - Knowledge of the labor force, particularly in the local area
  - An ability to serve as a role model for participants. Staff must understand that lack of experience or knowledge can be corrected through learning, and they must be willing to provide support to participants.

An essential feature of all the programs which were identified was a realization that simply stating that all occupational training areas are open to both sexes is not enough. More exposure of programs and support of nontraditional enrollees are needed for things to be truly equal. Successful programs are designed to provide this exposure and support. Readers are encouraged to look at the case study volume for more complete information on the common features which appear to lead to success as well as more in-depth information on the programs themselves.

Objective 6. IDENTIFY AND ANALYZE FACTORS EXTERNAL TO THE SCHOOL WHICH INHIBIT SEX EQUITY, SUCH AS RELUCTANCE OF EMPLOYERS OR UNIONS TO ACCEPT WOMEN FOR CERTAIN JOBS OR APPRENTICESHIP PROGRAMS, AND ANALYZE HOW SCHOOLS ARE DEALING WITH SUCH FACTORS.

Although the focus of this study has been on inequities in vocational education and the efforts of vocational educators to overcome them, it must be clearly understood that vocational education operates within the context of the community. The literature discusses a wide variety of factors which bear on the problems of sex inequity, and certainly not all of these factors are totally influenced or controlled by schools. However, what vocational educators perceive these factors to be, and how they are attempting to deal with them is important. This is the focus of the following discussion. It is presented in the following sub-sections:

- External constraints to equity in vocational education
- How schools are dealing with external factors

External Constraints to Equity in Vocational Education

When vocational educators were asked for their perceptions of the greatest constraints to sex equity in vocational education, the overwhelming response was that constraints emanating from the values and conservative attitudes in the community are the greatest inhibitors. The percent of state, district, and school level staff who first mentioned the constraint categories listed below is as follows:

	State Staff	District Staff	School Staff
Constraints imposed by attitudes and values in the community	51.6%	50.7%	48.1%
Constraints resulting from employer attitudes and actions	11.8%	17.8%	21.0%
Constraints within vocational education	21.4%	19.2%	12.1%
Constraints outside vocational education but within general education	8.5%	2.1%	5.0%

Thus staff at all levels tend to think that external factors resulting from attitudes and values in the community present the major roadblocks to equity. School staff feel that constraints resulting from employer attitudes and actions present the next greatest problem; state and district staff point to constraints within vocational education and then to constraints emanating from employers. In general, all levels of vocational staff, and particularly school staff, feel that external factors do inhibit equity efforts.

A more in-depth examination of community and employer constraints points to the following factors within these two areas.

	State Staff	District Staff	School Staff
Constraints imposed by attitudes and values in the community			
Fear of and resistence to change	3.4%	2.0%	1.0%
Parental attitudes and influence	28.1%	30.6%	12.8%
Pervasive conservative attitudes in the community	70.7%	62.6%	68.4%
Other	.7%	.7%	.1%
Constraints resulting from employer attitudes and actions			
Lack of job openings	2.7%	5.4%	.6%
Employer attitudes	58.4%	54.4%	57.2%
Lack of support once on the job	3.9%	1.4%	2.7%
Other	3.9%	2.0%	1.4%

Within these two categories, respondents clearly feel that conservative attitudes on the part of people in general and employers and parents in particular constitute the greatest constraints to equity.

Other data collected in the study also indicate that vocational educators feel equity efforts are thwarted, or at least influenced, by external factors. In general, vocational education students and staff feel that opportunities in the labor force are not equal, and that employers are unwilling to hire nontraditional workers. The following findings indicate this:

- Both teachers and counselors feel that only half of all employers are willing to hire nontraditional workers.
- Over half of all students (58%) feel that employers are generally unwilling to hire nontraditional males, and two-thirds (67%) feel employers are unwilling to hire nontraditional females.
- Instructors feel that men and women "probably do" have equal opportunities to obtain good, well-paying jobs, while counselors feel they "probably do not."
- Where opportunities are perceived to be unequal, instructors and counselors see the direction of bias overwhelmingly in favor of men.

In contrast to these findings, approximately 61% of students are either "not sure" or feel that sex discrimination in the labor force is "only a minor problem," while 16% say it is "not a problem." Contrastingly, 23% see it as a "serious

problem." It is noteworthy that those students who are most likely to perceive sex discrimination in the labor force are older. It is possible to surmise that these older students have in fact had experience in the labor force and thus have more information on which to base their opinions.

How Schools are Dealing with External Factors

The data show that there is little activity in terms of employer and community liaison efforts in order to foster greater sex equity. The following findings indicate this:

- The lowest mean level activity reported by state directors was for activities to assist employers to improve opportunities for women. In general state directors indicated they plan to work with employers to foster equity, but have not started. However, 15 of the states have no plans at all to do this. Only one-fifth of the states have already implemented employer liaison activities to improve opportunities for women.

- A third of the state directors report that their states have begun implementation or have fully implemented community liaison activities to improve opportunities for women.

- According to LEA directors and directors of counseling, only one-fifth to one-fourth of the LEAs have implemented community liaison activities and over half of the LEA directors report there are no plans to do so.

- According to instructors and counselors, only 13% of the vocational schools have begun or completed implementation of employer or community liaison activities.

Thus very few states, LEAs or schools are engaged in community and employer liaison activities. Yet this type of activity--particularly with employers--seems to be a critical ingredient in the success of efforts to foster greater equity. The directors of virtually all of the case study programs indicated that employer liaison activities were essential to the success of their programs.

In summary, while vocational educators see community factors and the reluctance of employers to hire nontraditional workers as major constraints to equity efforts, they are not generally engaged in significant liaison efforts to deal with these factors. The data from this study suggest that this type of activity can be a very effective technique for achieving equity in vocational education.

Objective 7. DEVELOP CRITERIA BY WHICH FEDERAL, STATE, AND LOCAL ADMINISTRATORS CAN MEASURE PROGRESS IN REDUCING SEX DISCRIMINATION AND STEREOTYPING

The criteria contained on the following pages are designed to assist others in determining whether education programs or systems are truly open and equitable to both sexes. These criteria have been developed during this study. It is hoped they will be useful to federal, state, and local administrators. The discussion will fall under three general headings:

- Preliminary remarks on useful approaches
- Criteria for investigating discrimination and efforts being made to overcome it
- Criteria for assessing efforts being made to overcome sex stereotyping

Preliminary Remarks on Useful Approaches

Assessing progress necessarily suggests some sort of a standard against which to measure change. In this case some standards are obvious--nontraditional enrollment, for example--but such obvious measures are not always easy to come by, nor may they be entirely satisfactory. Consider the teaching staff at a school in which there is very slow turnover and which is not expanding. Chances are that the staff will be highly traditional, with men teaching courses like auto body and women teaching courses like home economics, a situation that will not have changed much in many years. Such a school may well have exerted itself to assure equitable treatment of staff, but the efforts could not really be expected to manifest themselves quickly in changed staffing patterns. Thus all standards must be used intelligently and thoughtfully. With this proviso, the following are some suggestions about measures that might be used to assess progress in reducing sex discrimination and stereotyping.

Enrollment, staff makeup, and other "hard" data covering several years. Notwithstanding that they are not always totally satisfactory, data on the number and proportion of men and women teaching or studying nontraditional occupations are useful. Other hard data that may be useful are:

- Salaries -- Do approximately equally qualified men and women earn the same amount for equivalent work? Do male and female work/study or cooperative education students earn equal amounts for like work? Do they have an equal chance at the more lucrative slots?

- Advancement -- Are persons of one sex advanced from the ranks with disproportionate frequency? Are student leadership roles, particularly those which staff have a hand in selecting, disproportionately filled by members of one sex?

- "Housekeeping" Roles -- Do committee assignments fall with disproportionate frequency on members of one sex when this is not justified by expertise? Are a disproportionate number of men or women chosen as classroom assistants?

- Documented Formal Procedures -- Do rules and regulations assign male and female staff and students to different roles, or strongly suggest that different roles are appropriate? Are there formal guidelines designed to counteract or prevent inequities and, if so, when did they go into effect and how have they changed over the years? Have collective bargaining agreements included provisions related to sex equity? Have grievance procedures recognized matters related to sex inequities?

- Reviews -- Have procedures been reviewed for sex fairness, for example, because of Title IX? When? What were the findings? Were changes made as a result? Is someone responsible for periodic reviews and, if so, what kind of power does that person enjoy?

- Documentation Concerning Specific Efforts to Encourage Equity -- Is there evidence of specific activities ranging from workshops sponsored by the State Educational Agency, to exploratory courses to introduce students to nontraditional occupations, to funding projects designed to lessen inequities.

"Hard" Data on Short-Term Outcomes. There are many kinds of awareness activities, attitude change activities, curriculum and policy review procedures and the like that an educational agency might undertake. Many possible outcomes of such efforts lend themselves to empirical investigation without creating undue burdens.

- Questionnaires and Tests -- Many activities, from faculty meetings, to workshops, to publications, are meant to convey information related to sex equity of one kind or another--"how to spot sex bias in your classroom," "the facts about how many women work and what they earn," "how to overcome employer reluctance to hire the nontraditional graduate," "how to set up an attitude change workshop," "what the new state policy on sex equity means to you," and so on. Various kinds of pre/post examinations, role playing performances, and like measures can be used to see how well short term activities have worked in getting information across.

- "Unobtrusive" Measures -- You can count events. Do students inquire more frequently about nontraditional courses of study? Is the Sex Equity Coordinator more routinely consulted by occupational area specialists? Are more building principals setting up workshops for staff? Are sexist remarks less frequent in the lunchroom? Are pro-equity activities increasing and inequitable practices decreasing in the classroom?

Informal Comparisons with the Past. Emphasis on sex equity has grown dramatically in the last few years. If one can document the existence of workshops, materials reviews, and other activities to encourage sex equity which were undertaken rarely, if at all, until recent years, then that is evidence that something is being done.

In sum, there are a wide variety of approaches, from the rigorous to the informal, that can be used to assess progress--or lack of it--in achieving sex equity. In using them, it is important to distringuish between bona fide change and the simple existence of efforts. For example, it is necessary not merely to count how many workshops there were, but to determine what effect they have had on enrollment, inquiries, attitudes, or some other measure indicative of change.

Criteria for Investigating Discrimination and Efforts Being Made to Overcome It

Three categories will be used in discussing criteria for investigating discrimination and efforts being made to overcome it: conformity to laws, regulations, and policies; objective data on the status of men and women; and efforts to eliminate discrimination beyond those specifically required by law.

Conformity to laws, regulations, and policies. Since laws, regulations, and policies are changeable, we will not undertake to discuss criteria for each specific current requirement. Rather, we will look at categories into which requirements fall and into which they are likely to fall in the future. In reviewing such conformity it is critical, as just discussed, to distinguish between real progress and paper conformity.

- Have such topics as required by law been included in the State Plan, district funding requests, and the like?
- Have such staff as may be required in the law been hired? Are their assigned duties those stipulated in the law or associated regulations? Are such resources as required by law available to them?
- Have such data collection and reporting requirements as may be required by law been undertaken?
- Are Advisory Councils and other associated groups constituted as required by law? Do they undertake the activities stipulated for them?

- Have all mandated activities, such as programs for staff and students, reviews of programs for sex fairness, and liaison with groups outside of vocational education been undertaken?

- Have affirmative action and like procedures to assure equitable treatment of male and female staff and students been implemented?

- Is each of the above for which a timeline has been specified on schedule? If not, has provision been made to catch up?

- Have instances of discrimination been identified in undertaking any of the above? If so, have they been rectified? If not, have steps in the direction of rectification been taken? Have steps been taken to preclude similar occurrences in the future?

- Have procedures been developed and responsibilities assigned to monitor the success of activities to identify and eliminate discrimination? Have these procedures been carried out as planned? Is there evidence from this monitoring as to the success of these activities? Are procedures being planned or undertaken to remedy any deficiencies uncovered?

Objective data on the status of men and women. To a large extent, the data collected in complying with laws and regulations will answer questions under this topic. Here we will suggest some of the topics that might profitably be investigated during data collection.

- Are there rules or quotas that limit or deny student admission to certain programs on the basis of sex? Are there rules or requirements that have this effect even if they were not intended for this purpose?

- Are there regulations or hiring policies that have the effect of making it more difficult to hire a man than a woman for certain positions within vocational education? More difficult to hire a woman than a man?

- Are there policies or procedures that result in male and female students receiving consistently different treatment in obtaining work/study, cooperative education, or job placements?

- Are there variations in procedures used to alert students to training opportunities that have the effect of informing men about one set of opportunities and women about another set?

- Are selection procedures used that have the effect of giving preference at least in part on the basis of the sex of the applicant in picking students to fill a limited number of training program vacancies. What reasons are given when students are, as will sometimes happen, denied admission to their first choice for training? Do such refusals fall proportionately on would-be traditional and nontraditional students?

- Are there policies or practices that have the effect of making it more likely that persons of one of the sexes will be selected to fill certain leadership positions?

- Are there features of the salary or benefits policies or procedures that have the effect of providing differential compensation to men and women who are essentially equally qualified?

- Are there procedures and lines of authority for eliminating any discriminatory practices that affect staff or students? Are procedures actually used in instances where discrimination is identified? When used, have these procedures remedied the situation? Do the actions taken not only remedy existing instances of discrimination, but do they include provision to prevent recurrences of similar discriminatory events?

As implied in the phrasing of many of these questions, the practices or procedures need not be such as to limit outright the opportunities available to members of one of the sexes to be discriminatory. Rules or policies or practices that, however unintentionally, have this effect, can also be considered discriminatory. Thus, in examining programs for discrimination, vocational educators must be concerned as much with the unintended effects of policies and practices as with their intent. Likewise, in assessing progress in eliminating inequities, it is as important to look at the actual effects of changes in policies and practices on the status of men and women as to examine their form and intended effect.

Efforts to eliminate discrimination beyond those specifically required by law. Because of the wide variety of possibilities, and the varying suitability of any one of them for the diverse situations that arise, it is impractical to attempt to specify all of the possible criteria that might indicate that efforts were being made to eliminate discrimination. Some broad categories may be suggested.

- Are resources being committed beyond the minimum amounts required by law?

- Do staff with responsibility for identifying and eliminating discriminatory practices have real power within the system, or do they have relatively minor positions in the organization?

- Are concerted efforts being made to "troubleshoot" areas over which vocational educators have no official control, as opposed to using failings in these areas as a ready source of excuses? For example, it may be that there are very few women qualified to teach in some of the traditionally male trades. Have vocational educators attempted to work with training institutions to prepare greater numbers of qualified women?

- Have determined efforts been made to identify those schools or departments in which discriminatory practices persist and to insist on changes?

There are many possibilities here. The basic question is whether or not there is evidence that those responsible for vocational education programming at the state, district, or school levels have "adopted" the movement to end sex discrimination as their own. And, having done so, have they exerted themselves to ensure that discrimination is in fact eliminated, not merely to assure that their programs are in technical compliance with the law.

Criteria for Assessing Efforts Being Made to Overcome Sex Stereotyping

Because stereotyping involves attitudes and opinions, it is somewhat more difficult to identify and come to grips with than is discrimination. There is also a fine line between removal of all stereotypes and an insistence on a uniformity of belief. Nevertheless, there are a variety of steps vocational educators may take to encourage students to enroll in nontraditional programs, and to increase the likelihood that they will be well received. Some of these are listed below.

Since beliefs and actions are often closely related, it should come as little surprise that many efforts taken to affect one may well affect the other. Thus, there may appear to be overlays between the list that follows and that which preceded. Recall, however, that the former was concerned with actions that more or less overtly limit opportunity. The latter has to do with subtle inequities. Thus, it seems worthwhile to list criteria separately, not only because there are non-overlapping areas, but also because stereotyping is sufficiently important to merit independent attention even when the criteria do apply as well to discrimination.

Funding criteria

- Are funds specifically earmarked for activities to lessen stereotyping?
- Do reviews of funding requests take anti-stereotyping components into consideration?
- Are anti-stereotyping activities among the proposals for which discretionary funds may be used?

Materials review and development

- Are curriculum and recruitment materials routinely reviewed to be sure that they are not stereotyped? Are actions to remedy the situation taken in the event that stereotyping is found?

- Are publicity materials such as might be made available to the media or to employers reviewed to assure that they are not stereotyped? Are actions taken to eliminate such stereotyping as may be found?

- Are specific materials developed to point out the opportunities available in nontraditional areas? To encourage students to look into nontraditional opportunities? To gain media coverage of nontraditional students or workers?

- Are projects funded to develop nonstereotyped curriculum materials where such are not available? Are efforts made to work cooperatively with publishers of curriculum materials to lessen stereotyping?

- Are materials developed to use at inservice sessions to alert staff to stereotyping and what they can do to overcome it? Is there cooperation with teacher training institutions in development of preservice materials to train prospective teachers to lessen stereotyping?

Student awareness activities

- Are programs sponsored or undertaken directly to make students aware that men and women can fill the same range of jobs?

- Are there programs for students to identify stereotypes they may hold--"women don't need to work," "only an effeminate man would be a nurse," and so on--and to correct these impressions?

- Are programs funded or sponsored to give students a chance to try nontraditional roles? Are classes organized so that both girls and boys take shop and home economics, drafting and typing, and otherwise have equal opportunity to prepare for entry into vocational programs?

- Are efforts undertaken to ensure that those in a position to guide students present options based on student capabilities and interests, not on sex?

Staff awareness activities

- Are efforts undertaken to alert staff to the nature of stereotyping, its effects and manifestations?

- Are training programs offered to help staff deal effectively with stereotyping in working with students or with other staff? In working with employers, parents, or other persons outside of the educational system, but who are critical in any thoroughgoing effort to eliminate stereotypes?

- Are efforts made to inform staff about stereotyping within the vocational education system itself, and to encourage them to take action in their own domains of responsibility to eliminate the stereotyping?

For some agencies, certain of the above will not be suitable. Other agencies may wish to expand or modify many of these criteria. The list does provide some suggested criteria that vocational educators can use in asking themselves "Is this within our domain of responsibility," "Is this something needed here?," "Have we done this thoroughly enough?," and "Are there other criteria we should apply in our efforts to rid our programs of discrimination and steroetyping?"

CONTRACTOR'S RECOMMENDATIONS

The recommendations which can emerge from a study of this size are many. It is our hope that the information and analyses which have been presented will provide the stimulus for action and further research throughout the entire vocational education community. While it is not clear how much responsibility vocational education bears for the inequities which currently exist in the employment and earnings patterns in the United States, it is clear that men and women do not make vocational choices unencumbered by sex. The patterns of enrollment in vocational programs are heavily influenced by sex, as are the patterns of staffing. Furthermore, in the majority of cases, women emerge from vocational education programs with the virtual assurance of earning less income while working in lower prestige jobs. In addition, while the number of nontraditional students has increased in a few areas in recent years, in general there has been little movement toward a more balanced pattern of enrollments in areas traditionally dominated by either men or women. Therefore, it is imperative that continued attention be given to the issue of sex equity in vocational education. The effort must emanate from the federal, state, local, and individual levels.

We would like to make the following key recommendations for the directions in which the equity effort should be focused.

1. A concerted effort must be made to identify and disseminate exemplary programs and strategies for overcoming sex inequities in vocational education.

At present there are few examples of successful efforts to reduce sex inequities in vocational training programs. However, many states and districts appear to be ready to take the risk of setting up and implementing programs and activities if they have sufficient information on what to do and what works. Thus it is of vital importance that information on successful strategies be disseminated to the widest possible vocational education audience. The case studies contained in Volume III of this Final Report are an important step in this direction.

The U.S. Office of Education has established a mechanism for approving programs for dissemination through its Joint Dissemination Review Panel (JDRP). Once passed by the JDRP, programs are eligible for dissemination funds. Program developers should be encouraged to make use of the JDRP, and aided in this effort to collect and supply adequate data and documentation of program procedures and outcomes. The federal government could play an active role in this effort and in helping programs already identified to obtain JDRP approval. Furthermore, it could play an active role in the identification and support of additional exemplary programs.

2. There needs to be considerably more emphasis at all levels on activities designed to overcome inequities, in addition to monitoring and reviewing designed to discover such inequities.

A major theme throughout the legislation is that an active effort to overcome inequities must be made. However, the primary form of activity which was observed in this study consisted of reviewing and monitoring--activities which are quite passive in nature. At best, what can presently be observed is an emerging equity effort. What is lacking is corrective action to overcome inequities discovered through review and monitoring. States, local education agencies, and schools need to be provided both with incentives to act, and with examples of successful approaches. Thus the preceding recommendation is extremely relevant to this one as well. Data from this study revealed that in those schools where an active effort is underway to address inequities, there is a higher proportion of nontraditional students. Concerted efforts, particularly those which directly involve students, are of vital importance in making progress in reducing inequities.

While an increase in nontraditional student enrollments is one clear sign that opportunities within vocational education are more equal, the equity effort must be more than a "numbers game." What is essential is the development of a system which makes it possible for each individual, regardless of sex, to choose freely an area of vocational training, and just as importantly, to be supported once that choice has been made. An active effort on the part of vocational educators will be required in order to establish such a system. Thus, it is the openness of the system itself and not only its end results which must come under scrutiny.

Specific examples of the types of active efforts which are required in order to take corrective action and develop truly open systems are contained throughout the entire report. However, the following types of activities are recapitulated here and strongly recommended:

- Special programs should be developed to acquaint students with, and encourage them to consider, nontraditional career options. The objective is not to coerce and push people into roles they do not desire, but to broaden the range of occupational choices for all individuals.

- Particular attention and assistance should be provided to minority students, particularly women, and to women who have been out of the labor market for a considerable period of time.

- Affirmative action programs for administrative, instructional, and support staff should be initiated to overcome the effects of past discrimination. Furthermore, there must be equality between men and women holding like positions in terms of salaries, responsibilities, and opportunities for advancement.

- Liaison should be established with teacher training institutions to encourage potential nontraditional staff.

- Vocational educators should work with employers and community groups in an effort to foster greater sex equity. This was a key recommendation of virtually every successful program identified in this study.

3. <u>The criteria provided in Objective 7 of this summary should be used by federal, state, and local administrators to assess the openness of vocational education programs</u>.

In a sense, the entire content of Objective 7 is a recommendation. The criteria contained in it were developed by the American Institutes for Research based on the experience of conducting the Vocational Education Equity Study.

The guidelines cited go beyond the examination of enrollment and staffing patterns and blatant discriminatory practices, to point out additional critical areas which must be examined, including more subtle but equally limiting forms of discrimination. Active attention to these criteria will greatly encourage sex equity.

To facilitate the assessment of equity in vocational education, the Replication Handbook, Volume IV, is provided. It can be used as a tool by others in replicating this study or conducting similar smaller studies. The Replication Handbook can serve as a form of technical assistance to those individuals. Thus, in addition to providing recommendations on areas which should be investigated, a mechanism for doing so has been provided.

4. <u>The role and the effectiveness of the Vocational Education Sex Equity Coordinators need to be examined once these individuals have been on the job for sufficient time to have an impact</u>.

At the time of data collection for this study, most Sex Equity Coordinators were very new to their jobs. Thus in a sense their reports of activity could only be reports of what they intended to do. Many were still establishing themselves and their credibility and had yet to implement activities. A further examination will be required in order to determine how effective they are. It will be important to study the activities of these individuals to determine which produce the best results under what circumstances. Since the positioning of the coordinators within the state structure, and the experience they bring to the job, varies considerably by state, it will be important to observe how these factors related to effectiveness. Clearly, the sex equity effort cannot be left to the coordinator alone, but the role of this person will be of vital importance in that effort. In order to make the most of this position, systematic study of the Sex Equity Coordinators' role and effectiveness will be needed.